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EXAMINER	
FERGUSON SAMRETH, MARISSA LIANA	
ART UNIT	PAPER NUMBER
2854	

NOTIFICATION DATE	DELIVERY MODE
08/27/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/803,225	MA ET AL.	
	Examiner	Art Unit	
	MARISSA L. FERGUSON-SAMRETH	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,10-17,19-22 and 26-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1, 3-6, 10-17, 19-22 and 26-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 5/27/08 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 4, 10, 11, 14, 16, 17, 19, 20, 22, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamura et al. (JP 2000-108497) in view of Iljima (JP 2001-049155) and Allen et al. (JP 2003-011353).

Regarding claims 1,3, 4, 10, 11, 14,17, 19, 20, 22, 26 and 27 Miyamura et al. teaches an apparatus and method comprising an offset media (5), inkjet ink being configured to be ink-jetted (4) onto the ink offset media (5) and a calendaring device (2) configured for applying pressure and heat to offset media once the ink-jetted thereon, wherein the pressure is mechanical pressure applied at from 500 psi to 3000 psi, wherein the heat to be applied is from 20° to 90°C (Paragraphs 0029-0030).

Miyamura et al. does not explicitly disclose an ink-jet ink including a pigment colorant comprising latex from 0.1wt% to 10wt%, wherein the latex particulates are predominately from 20nm to 500 nm in size and a fixer composition including a crashing agent from 0.1 wt% to 10 wt %, that is reactive with a component of the ink-jet ink, wherein the fixer composition being configured to be overprinted or underprinted on the offset media with respect to the inkjet ink and wherein the crashing agent is selected from the group consisting of cationic polymers, multivalent metal ions or ionic groups, acids and combinations thereof and wherein the crashing agent is a cationic polymer selected from the group consisting of polyvinylpyridines, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyehtyleneimines, polybiguanides, polyguanides, polyvinylamines, polyallyamines, polyacrylamines, polyacrylamides, polyquatemaryamines, cationic polyurathenes, aminecelluloses, polysaccharide amines, and combinations thereof.

Iljima teaches an ink-jet ink including a pigment colorant comprising latex from 0.1wt% to 10wt% (Solution and paragraph 0013) wherein the latex particulates are predominately from 20nm to 500 nm in size (paragraph 0017). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Miyamura et al. to replace the ink-jet ink thereof with an ink-jet ink with a pigment as taught by Iljima for the purpose of obtaining an image with high waterproof and abrasion resistance thereby providing good ink preservation.

However, Ilijima does not explicitly disclose a fixer composition including a crashing agent from 0.1 wt% to 10wt %, that is reactive with a component of the ink-jet

ink, said fixer composition being configured to be overprinted or underprinted on the offset media with respect to the inkjet ink and wherein the crashing agent is selected from the group consisting of cationic polymers, multivalent metal ions or ionic groups, acids and combinations thereof and wherein the crashing agent is a cationic polymer selected from the group consisting of polyvinylpyridines, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyehtyleneimines, polybiguanides, polyguanides, polyvinylamines, polyallyamines, polyacrylamines, polyacrylamides, polyquatemaryamines, cationic polyurathenes, aminecelluloses, polysaccharide amines, and combinations thereof.

Allen et al. teaches an overcoat fixer composition including a crashing agent from 0.1wt% to 10wt% that is reactive with a component of the ink-jet ink and wherein the crashing agent is selected from the group consisting of cationic polymers, multivalent metal ions or ionic groups, acids and combinations thereof and wherein the crashing agent is a cationic polymer selected from the group consisting of polyvinylpyridines, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyehtyleneimines, polybiguanides, polyguanides, polyvinylamines, polyallyamines, polyacrylamines, polyacrylamides, polyquatemaryamines, cationic polyurathenes, aminecelluloses, polysaccharide amines, and combinations thereof (Solution and paragraphs 0019-0021).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Miyamura et al. to

include a fixer composition with a crashing agent as taught by Allen et al. for the purpose of reducing condensation thereby improving print quality.

Regarding claim 16, Miyamura et al. teaches a calendaring device (2) that includes a pair of rollers (6) that are configured to apply pressure and heat to the offset media once the ink-jet ink is printed thereon (Figure 1 and Paragraphs 0029-0030).

3. Claims 5, 6, 15, 21, 28, 31-35 and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamura et al. (JP 2000-108497) in view of Iljima (JP 2001-049155) and Allen et al. (JP 2003-011353) as applied to claims 1 and 17 above, and further in view of O'Connor et al. (JP 2002-207275).

Regarding claims 5, 15, 21, 28, 31 and 40, Miyamura et al. in view of Iljima and Allen et al. teaches the claimed invention and method with the exception of an overcoat composition including a liquid vehicle having latex particulates dispersed therein. O'Connor et al. teaches an overcoat composition containing water dispersible latex particles (Solution). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention taught by Miyamura et al. in view of Iljima and Allen et al. to include a an overcoat composition with a liquid vehicle as taught by O'Connor et al. for the purpose of providing an image with a protective overcoat.

Regarding claims 6, 32-35, 38, and 39 Miyamura et al. does not explicitly disclose an ink-jet ink including a pigment colorant comprising latex from 0.1wt% to 10wt%, wherein the latex particulates are predominately from 20nm to 500 nm in size

and a fixer composition including a crashing agent from 0.1 wt% to 10 wt %, that is reactive with a component of the ink-jet ink, wherein the fixer composition being configured to be overprinted or underprinted on the offset media with respect to the inkjet ink and wherein the crashing agent is selected from the group consisting of cationic polymers, multivalent metal ions or ionic groups, acids and combinations thereof and wherein the crashing agent is a cationic polymer selected from the group consisting of polyvinylpyridines, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyehtyleneimines, polybiguanides, polyguanides, polyvinylamines, polyallyamines, polyacrylamines, polyacrylamides, polyquatemaryamines, cationic polyurathenes, aminecelluloses, polysaccharide amines, and combinations thereof.

Iljima teaches an ink-jet ink including a pigment colorant comprising latex from 0.1wt% to 10wt% (Solution and paragraph 0013) wherein the latex particulates are predominately from 20nm to 500 nm in size (paragraph 0017). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Miyamura et al. to replace the ink-jet ink thereof with an ink-jet ink with a pigment as taught by Iljima for the purpose of obtaining an image with high waterproof and abrasion resistance thereby providing good ink preservation.

Regarding claim 41, Miyamura et al. teaches a calendaring device (2) include a pair of rollers (6) that are configured to apply pressure and heat to the offset media once the ink-jet ink is printed thereon (Paragraphs 0029-0030).

4. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamura et al. (JP 2000-108497) in view of Iljima (JP 2001-049155) and Allen et al. (JP 2003-011353) as applied to claim 10 above, and further in view of Takahashi et al. (US Patent 5,624,484).

Miyamura et al. in view of Iljima and Allen et al. teach the claimed invention with the exception of wherein a crashing agent is an acid selected from the group consisting of succinic acid, glycolic acid, citric acid, nitric acid, hydrochloric acid, phosphoric acid, sulfuric acid, polyacrylic acid, acetic acid, malonic acid, maleic acid, ascorbic acid, glutaric acid, fumaric acid, tartaric acid, lactic acid, nitrous acid, boric acid, carbonic acid, carboxylic acids such as formic acid, chloroacetic acid, dichloroacetic acid, trichloroacetic acid, fluoroacetic acid, trimethylacetic acid, methoxyacetic acid, mercaptoacetic acid, propionic acid, butyric acid, valeric acid, caprioc acid, caprylic acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, oleic acid, rinolic acid, rinoleic acid, cyclohexanecarboxylic acid, phenylacetic acid, benzoic acid, o-toluic acid, m-toluic acid, p-toluic acid, o-chlorobenzoic acid, m-chlorobenzoic acid, p-chlorobenzoic acid, o-bromobenzoic acid, m-bromobenzoic acid, p-bromobenzoic acid, o-nitrobenzoic acid, m-nitrobenzoic acid, p-nitrobenzoic acid, oxalic acid, adipic acid, phthalic acid, isophthalic acid, terephthalic acid, salicylic acid, p-hydrobenzoic acid, anthranilic acid, m-aminobenzoic acid, p-aminobenzoic acid, benzenesulfonic acid, methylbenzenesulfonic acid, ethylbenzenesulfonic acid, dodecylbenzenesulfonic acid, 5-sulfosalicylic acid, 1-sulfonaphthalene, hexanesulfonic acid, octanesulfonic acid, dodecanesulfonic acid, amino acids such as glycine, alanine,

valine, .alpha.-aminobutyric acid, .alpha.-aminobutryic acid, .alpha.-alanine, taurine, serine, .alpha.-amino-n-caprioc acid, leucine, norleucine, phenylalanine, and combinations thereof.

Takahashi et al. teaches a crashing agent acid selected from the group consisting of succinic acid, glycolic acid, citric acid, nitric acid, hydrochloric acid, phosphoric acid, sulfuric acid, polyacrylic acid, acetic acid, malonic acid, maleic acid, ascorbic acid, glutaric acid, fumaric acid, tartaric acid, lactic acid, nitrous acid, boric acid, carbonic acid, carboxylic acids such as formic acid, chloroacetic acid, dichloroacetic acid, trichloroacetic acid, fluoroacetic acid, trimethylacetic acid, methoxyacetic acid, mercaptoacetic acid, propionic acid, butyric acid, valeric acid, caprioc acid, caprylic acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, oleic acid, rinolic acid, rinoleic acid, cyclohexanecarboxylic acid, phenylacetic acid, benzoic acid, o-toluic acid, m-toluic acid, p-toluic acid, o-chlorobenzoic acid, m-chlorobenzoic acid, p-chlorobenzoic acid, o-bromobenzoic acid, m-bromobenzoic acid, p-bromobenzoic acid, o-nitrobenzoic acid, m-nitrobenzoic acid, p-nitrobenzoic acid, oxalic acid, adipic acid, phthalic acid, isophthalic acid, terephthalic acid, salicylic acid, p-hydrobenzoic acid, anthranilic acid, m-aminobenzoic acid, p-aminobenzoic acid, benzenesulfonic acid, methylbenzenesulfonic acid, ethylbenzenesulfonic acid, dodecylbenzenesulfonic acid, 5-sulfosalicylic acid, 1-sulfonaphthalene, hexanesulfonic acid, octanesulfonic acid, dodecanesulfonic acid, amino acids such as glycine, alanine, valine, .alpha.-aminobutyric acid, .alpha.-aminobutryic acid, .alpha.-alanine, taurine,

serine, .alpha.-amino-n-caprioc acid, leucine, norleucine, phenylalanine, and combinations thereof (column 6, lines 10-26).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Miyamura et al. in view of Iljima and Allen et al. to replace the crashing agent thereof with a crashing agent selected from the group consisting of an acid as taught by Takahashi et al. for the purpose of achieving and obtaining good print quality.

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamura et al. (JP 2000-108497) in view of Iljima (JP 2001-049155) and Allen et al. (JP 2003-011353) as applied to claim 17 above, and further in view of Tamagawa et al. (US Publication 2003/0198885).

Miyamura et al. in view of Iljima and Allen et al. teach the claimed invention with the exception of a step of applying heat to the printed image to contribute to the physical property of the image being altered and a physical property is smoothness, wherein upon. applying pressure, the printed image is modified from having a textured profile to a smoother profile. Tamagawa et al. provides the calendaring treatment in order to alter the appearance of a substrate by providing a smooth surface (Paragraph 0011). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Miyamura et al. in view of Iljima and Allen et al. to smoothness as a physical attribute as taught by Tamagawa et al., since Tamagawa et al. teaches it is advantageous to form an image having superior image quality and gloss.

6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamura et al. (JP 2000-108497) in view of Iljima (JP 2001-049155) and Allen et al. (JP 2003-011353) as applied to claim 17 above, and further in view Deguchi et al. (JP 02026747).

Miyamura et al. in view of Iljima and Allen et al. teach the method and invention claimed except for wherein the physical property is flow, wherein upon applying pressure, the printed image is temporarily modified from a more solid configuration to a more liquid configuration. Deguchi et al. teaches a hot melt type ink jet printer that melts the printing ink on a paper and softens the ink due to pressure applied by a device (Purpose and Constitution). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Miyamura et al. in view of Iljima and Allen et al. to include a printing image that is temporarily modified due to pressure as taught by Deguchi et al., since Deguchi et al. teaches that it is advantageous to add heat in order to make the printed image into a more liquid configuration.

7. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamura et al. (JP 2000-108497) in view of Iljima (JP 2001-049155), Allen et al. (JP 2003-011353) O'Connor et al. (JP 2002-207275) as applied to claim 32 above, and further in view of Takahashi et al. (US Patent 5,624,484).

Miyamura et al. in view of Iljima, Allen et al. and O'Connor teach the claimed invention with the exception of wherein a crashing agent is an acid selected from the group consisting of succinic acid, glycolic acid, citric acid, nitric acid, hydrochloric acid,

phosphoric acid, sulfuric acid, polyacrylic acid, acetic acid, malonic acid, maleic acid, ascorbic acid, glutaric acid, fumaric acid, tartaric acid, lactic acid, nitrous acid, boric acid, carbonic acid, carboxylic acids such as formic acid, chloroacetic acid, dichloroacetic acid, trichloroacetic acid, fluoroacetic acid, trimethylacetic acid, methoxyacetic acid, mercaptoacetic acid, propionic acid, butyric acid, valeric acid, caprioc acid, caprylic acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, oleic acid, rinolic acid, rinoleic acid, cyclohexanecarboxylic acid, phenylacetic acid, benzoic acid, o-toluic acid, m-toluic acid, p-toluic acid, o-chlorobenzoic acid, m-chlorobenzoic acid, p-chlorobenzoic acid, o-bromobenzoic acid, m-bromobenzoic acid, p-bromobenzoic acid, o-nitrobenzoic acid, m-nitrobenzoic acid, p-nitrobenzoic acid, oxalic acid, adipic acid, phthalic acid, isophthalic acid, terephthalic acid, salicylic acid, p-hydrobenzoic acid, anthranilic acid, m-aminobenzoic acid, p-aminobenzoic acid, benzenesulfonic acid, methylbenzenesulfonic acid, ethylbenzenesulfonic acid, dodecylbenzenesulfonic acid, 5-sulfosalicylic acid, 1-sulfonaphthalene, hexanesulfonic acid, octanesulfonic acid, dodecanesulfonic acid, amino acids such as glycine, alanine, valine, .alpha.-aminobutyric acid, .alpha.-aminobutryic acid, .alpha.-alanine, taurine, serine, .alpha.-amino-n-caprioc acid, leucine, norleucine, phenylalanine, and combinations thereof.

Takahashi et al. teaches a crashing agent acid selected from the group consisting of succinic acid, glycolic acid, citric acid, nitric acid, hydrochloric acid, phosphoric acid, sulfuric acid, polyacrylic acid, acetic acid, malonic acid, maleic acid, ascorbic acid, glutaric acid, fumaric acid, tartaric acid, lactic acid, nitrous acid, boric

acid, carbonic acid, carboxylic acids such as formic acid, chloroacetic acid, dichloroacetic acid, trichloroacetic acid, fluoroacetic acid, trimethylacetic acid, methoxyacetic acid, mercaptoacetic acid, propionic acid, butyric acid, valeric acid, caprioc acid, caprylic acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, oleic acid, rinolic acid, rinoleic acid, cyclohexanecarboxylic acid, phenylacetic acid, benzoic acid, o-toluic acid, m-toluic acid, p-toluic acid, o-chlorobenzoic acid, m-chlorobenzoic acid, p-chlorobenzoic acid, o-bromobenzoic acid, m-bromobenzoic acid, p-bromobenzoic acid, o-nitrobenzoic acid, m-nitrobenzoic acid, p-nitrobenzoic acid, oxalic acid, adipic acid, phthalic acid, isophthalic acid, terephthalic acid, salicylic acid, p-hydrobenzoic acid, anthranilic acid, m-aminobenzoic acid, p-aminobenzoic acid, benzenesulfonic acid, methylbenzenesulfonic acid, ethylbenzenesulfonic acid, dodecylbenzenesulfonic acid, 5-sulfosalicylic acid, 1-sulfonaphthalene, hexanesulfonic acid, octanesulfonic acid, dodecanesulfonic acid, amino acids such as glycine, alanine, valine, .alpha.-aminobutyric acid, .alpha.-aminobutryic acid, .alpha.-alanine, taurine, serine, .alpha.-amino-n-caprioc acid, leucine, norleucine, phenylalanine, and combinations thereof. (column 6, lines 10-26).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Miyamura et al. in view of Iljima, Allen et al. and O'Connor to replace the crashing agent thereof with a crashing agent selected from the group consisting of an acid as taught by Takahashi et al. for the purpose of achieving and obtaining good print quality.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARISSA L. FERGUSON-SAMRETH whose telephone number is (571)272-2163. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Judy Nguyen/
Supervisory Patent Examiner, Art Unit 2854

MARISSA FERGUSON-SAMRETH
Examiner
Art Unit 2854

MFS